



Fig. 2

The diagram illustrates a process for separating CO₂ from an inlet gas stream. The process begins with an **INLET GAS STREAM** (14) entering a system. A valve (110) controls the flow into a pump (16). The gas then passes through a heat exchanger (18) and a pump (20) before entering a **REBOILER/SEPARATOR** (74). The separator has two outlets: a top outlet (76) leading to a **DISTILLATION COLUMN** (24) and a bottom outlet (78) leading to a **REBOILER/SEPARATOR** (74). The distillation column (24) has a top outlet (26) leading to a **PRIMARY REFLUX DRUM** (38) and a bottom outlet (106) leading to a **SECONDARY REFLUX DRUM** (96). The primary reflux drum (38) has a top outlet (44) leading to a pump (42) and a bottom outlet (46) leading to a heat exchanger (36). The secondary reflux drum (96) has a top outlet (104) leading to a pump (98) and a bottom outlet (114) leading to a heat exchanger (102). The heat exchanger (102) has a top outlet (94) leading to a pump (62) and a bottom outlet (112) leading to a pump (16). The pump (62) leads to a **MEMBRANE UNIT** (48). The membrane unit (48) has a top outlet (54) leading to a **PERMEATE GAS COMPRESSOR** (56) and a bottom outlet (58) leading to a pump (60). The pump (60) leads to a heat exchanger (64) and a pump (66). The heat exchanger (64) has a top outlet (34) leading to a pump (36) and a bottom outlet (116) leading to a pump (16). The pump (36) leads to a heat exchanger (32) and a pump (40). The heat exchanger (32) has a top outlet (28) leading to a pump (22) and a bottom outlet (116) leading to a pump (16). The pump (22) leads to a heat exchanger (20) and a pump (18). The heat exchanger (20) has a top outlet (72) leading to a pump (70) and a bottom outlet (74) leading to a pump (76). The pump (70) leads to a heat exchanger (78) and a pump (72). The heat exchanger (78) has a top outlet (82) leading to a pump (84) and a bottom outlet (86) leading to a pump (88). The pump (84) leads to a heat exchanger (80) and a pump (82). The heat exchanger (80) has a top outlet (84) leading to a pump (86) and a bottom outlet (88) leading to a pump (90). The pump (86) leads to a heat exchanger (88) and a pump (92). The heat exchanger (88) has a top outlet (94) leading to a pump (96) and a bottom outlet (98) leading to a pump (100). The pump (96) leads to a heat exchanger (102) and a pump (104). The heat exchanger (102) has a top outlet (104) leading to a pump (106) and a bottom outlet (108) leading to a pump (110). The pump (106) leads to a heat exchanger (108) and a pump (112). The heat exchanger (108) has a top outlet (112) leading to a pump (114) and a bottom outlet (116) leading to a pump (118). The pump (114) leads to a heat exchanger (116) and a pump (118). 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The heat exchanger (414) has a top outlet (416) leading to a pump (418) and a bottom outlet (420) leading to a pump (422). The pump (418) leads to a heat exchanger (422) and a pump (424). The heat exchanger (422) has a top outlet (424) leading to a pump (426) and a bottom outlet (428) leading to a pump (430). The pump (426) leads to a heat exchanger (430) and a pump (432). The heat exchanger (430) has a top outlet (432) leading to a pump (434) and a bottom outlet (436) leading to a pump (438). The pump (434) leads to a heat exchanger (438) and a pump (440). The heat exchanger (438) has a top outlet (440) leading to a pump (442) and a bottom outlet

Fig. 3

